

August 2005 - Review of Weather Including Temperatures and Precipitation for the Quad State Region.

Weather Summary for August 2005

Precipitation

August was a month of contradictions – from drought to flooding tropical rains, from low water to river flooding. August was also a hot month with 19+ days of 90 degrees or higher temperatures. Temperatures for the month were 2 to 5 degrees higher than normal (76 to 78 degrees). While drought conditions were the precedent during the first half of the month, the tropical rains of Katrina produced copious amounts during the last couple of days of August. In Evansville, a record daily rainfall of 3.03 inches on August 30 brought the final monthly total to 8.51 inches. This surpassed the previous record of 8.43 inches set in 1977. Records for Evansville date back to 1897. At Paducah, 6.07 inches was the monthly total for August, making it the fourth wettest August on record. The record wettest August at Paducah was 7.60 inches in 1950, followed by 7.24 inches in 1977, and 7.16 inches in 1982. Records at Paducah date back to 1949. A daily record was broken on the 30th, when 3.11 inches fell.

Strong high pressure was in control of the region during the first few days of August. A slow moving weak front sagged south of the region between the 5th and 7th before washing out over the Tennessee Valley. Along and ahead of the front, scattered showers and thunderstorms developed producing rainfall totals generally less than three-quarters of an inch. Most areas remained dry and many rivers continued to fall to the lowest levels since the 1988 drought.

In the upper levels of the atmosphere, high pressure controlled the rest of the month. This high slowly moved from the Central Plains to off the southeast coast. At the surface, several weak fronts moved across the region. Scattered showers and thunderstorms, some containing very heavy rainfall, developed between the 12th and the 23rd. Many of these storms produced a quick 1 to 2 inches that quickly inundated roads and drainage systems. Rainfall amounts during this extended time ranged from 1.5 to 3 inches.

As the high moved off the southeast coast, warm, moist and unstable air streamed back into the region. The remnants of a frontal boundary remained over the region and provided the focus for showers and thunderstorms on the 26th through 29th. The heaviest rains fell in Evansville, Indiana during the early morning hours of the 26th and in Hopkinsville, Kentucky on the 29th. In Evansville, a neighborhood became inundated when heavy rains combined with poor drainage. Many homes were flooded. In Hopkinsville, over 6 inches of rain fell between late on the 28th to the 29th. The Little River overflowed its banks in town. Many homes and businesses flooded and over one dozen roads were closed.

Hurricane Katrina made landfall near Biloxi, Mississippi on the 29th with 145 mph winds and record storm surges up to 25 feet. Katrina moved north through Mississippi into the Tennessee River Valley. Heavy rains fell from late on the 29th through the 30th. Most locations across west Kentucky, southeast Illinois and southwest Indiana picked up 3 to 5 inches of rain while southeast Missouri and southwest Illinois received 1 to 3 inches. The hardest hit areas were along a swath from southern Calloway County through Todd County in west Kentucky. These areas had received heavy rains in the 24 hours previous and Flood Warnings were posted for these counties from late on the 29th through the 30th.

Figure 1. August 2005 Average Daily Temperature Summaries (Degrees F) for Several Quad State Region Locations.

<u>LOCATION</u>	<u>TEMPERATURES</u>	<u>HIGH</u>	<u>LOW</u>	<u>AVERAGE</u>
<i>Carbondale Illinois</i>	Normal (94 years)	87.5	63.3	75.7
	2005	90.8	69.2	80.0
<i>Cape Girardeau Missouri</i>	Normal (30 years)	88.3	66.9	77.9
	2005	92.0	70.5	81.3
<i>Evansville Indiana</i>	Normal (30 years)	87.2	65.7	76.7
	2005	89.3	69.2	79.3
<i>Paducah Kentucky</i>	Normal (30 years)	88.1	66.3	77.4
	2005	90.8	69.4	80.1
<i>Poplar Bluff Missouri</i>	Normal (30 years)	89.3	67.0	78.4
	2005	90.4	70.9	80.7

Figure 2. August Average Monthly Precipitation (inches) and 2005 Observed Precipitation for Several Quad State Region Locations.

<u>LOCATION</u>		<u>TOTAL PRECIPITATION</u> (includes melted snow)	<u>2005 DEPARTURE</u> <u>FROM NORMAL</u>
<i>Carbondale Illinois</i>	Normal:	3.98	-1.61
	2005:	2.37	
<i>Cape Girardeau Missouri</i>	Normal:	3.38	-0.91
	2005:	2.39	

<i>Evansville Indiana</i>	Normal:	3.14	5.37
	2005:	8.51	
<i>Paducah Kentucky</i>	Normal:	2.99	3.08
	2005:	6.07	
<i>Poplar Bluff Missouri</i>	Normal:	3.30	-0.99
	2005:	2.39	